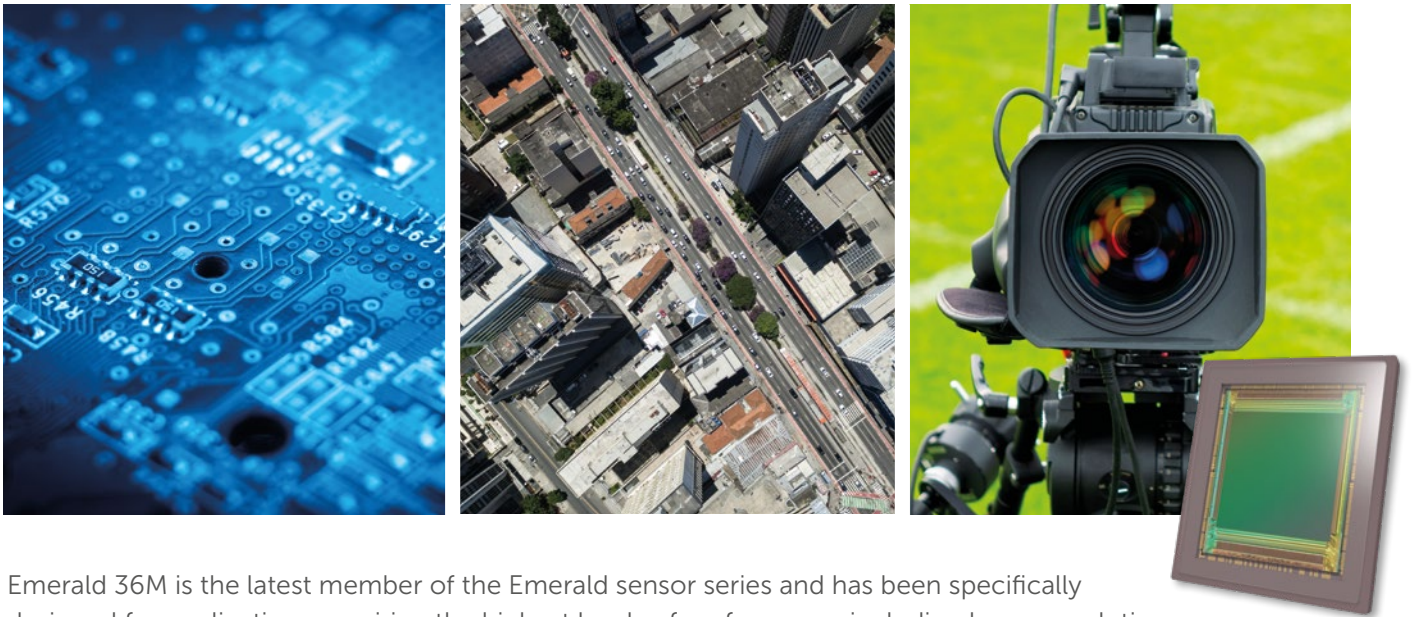


Emerald 36M, Bringing Your System to the Next Level



Emerald 36M is the latest member of the Emerald sensor series and has been specifically designed for applications requiring the highest levels of performance including larger resolution, higher speed and improved electro-optical performance. Emerald 36M will enable you to take your vision system to the next level, by leveraging its high performance global shutter pixel and thoughtful design.

SENSOR FEATURES

Combining 6K resolution and high speed
36MP resolution and 86fps frame rate

Highly featured sensor including functions such as multi-ROI, real-time HDR, or image statistics

Excellent low-noise performances due to its high sensitivity and low readout noise of 3e-

Compact format & easy integration with Four Thirds optics and cost-effective FPGAs

CUSTOMER BENEFITS

Increased throughput with higher frame rate and optimized inspection system path

Surveillance or mapping of wider areas in a single high-resolution shot

Improved detection ratio with higher accuracy and excellent low-noise imaging

Upgrading performances while saving costs of optics, electronics and lighting

SENSOR CHARACTERISTICS

	EMERALD 36M High speed	EMERALD 36M Ultra-high speed
Resolution – pixels	6,144 (H) x 6,144 (V)	
Aspect ratio	1 : 1	
Size type	Four Thirds (21.7mm diagonal)	
Pixel type / size – square	Global Shutter / 2.5µm	
Maximum frame rate @ 10bits	43fps	86fps
Readout noise – e-	3	
Dynamic range – dB	66	
SNRmax – dB	37.8	
Dark current – e-/s	<1	
Q.E. - %, @ 500nm	70	
Shutter efficiency (1/PLS) – e-	10,000	

SYSTEM INTEGRATION

- » Options:
 - Color Filter Array: B&W or color
 - Speed grades: High speed or Ultra-high speed
 - Chief Ray Angle: 5° or 0° (upon request)
 - AR coating (upon request)
- » Package: ceramic µPGA, 37 x 42 mm²
- » Optical center centered in package
- » Pin-to-pin compatible with Emerald 67M
- » Power consumption: ≤3.5W @ full speed & full resolution
- » Scalable LVDS outputs (64, 32 or 16 channels)
- » Versatility between 8, 10 or 12 bit depth
- » SPI controls

EMBEDDED FEATURES

- » ROI (up to 64, overlap and independent configurations allowed)
- » High Dynamic Range modes (including real-time HDR)
- » Binning
- » Sub sampling
- » Look-up table
- » Defective pixel correction
- » FPN correction
- » Flipping/mirroring
- » Image statistics and context output
- » Multiple trigger modes

TYPICAL APPLICATIONS

- » High-end electronic and FPD inspection
- » 3D AOI & metrology
- » High-end surveillance
- » Aerial imaging & mapping
- » Earth observation
- » Scientific cameras and microscopy
- » Entertainment
- » Medical

ORDER CODES – EMERALD 36M SAMPLES (1-unit pack)

	B&W	Color
High speed	EV2S36MB-CLV0350-T	EV2S36MC-CLV0350-T
Ultra-high speed	EV2S36MB-CLV0650-T	EV2S36MC-CLV0650-T